

**STOCKPILE
REPORT
to the
CONGRESS**

July - December 1968

**EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF EMERGENCY PREPAREDNESS**

WASHINGTON, D. C. 20504

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF EMERGENCY PREPAREDNESS
WASHINGTON, D.C. 20504

OFFICE OF THE DIRECTOR

May 2, 1969

Honorable Spiro T. Agnew
President of the Senate


Honorable John W. McCormack
Speaker of the House of Representatives

Sirs:

Pursuant to Section 4 of the Strategic and Critical Materials Stock Piling Act, Public Law 520, 79th Congress, there is presented herewith the semiannual report to the Congress on the strategic and critical materials stockpiling program for the period July 1 to December 31, 1968.

A statistical supplement to this report was transmitted to you on March 4, 1969.

Sincerely,


G. A. Lincoln
Director

CONTENTS

	Page
Introduction.	1
Supply-Requirements Studies	1
Summary of Government Inventories of Strategic and Critical Materials	2
Status of Stockpile Objectives	4
Summary of Government Inventories, Objectives, Excesses and Balance of Disposal Authorizations (Basic Stockpile Materials), December 31, 1968	5
Other Materials in Government Inventories.	8
Summary of Government Inventories and Balance of Disposal Authorizations Covering Materials for Which There Are No Stockpile Objectives, December 31, 1968	8
National Stockpile Activities.	10
Procurement and Upgrading	10
Disposal Program Activity.	11
Disposals of Strategic and Critical Materials Table	13
Legislation Relative to Stockpile Disposals	15
Notes on Strategic and Critical Materials	17
Activities of the General Services Administration	20
Activities of the Department of Commerce	21
Activities of the Department of State	24
Activities of the Department of Agriculture.	24
Activities of the Department of the Interior.	25
Reports Issued by the Bureau of Mines.	28
Reports Issued by the U.S. Geological Survey.	29
Expenditures of Stockpile Funds, by Type, Cumulative and for First Half Fiscal Year 1969.	30
Total Obligations and Expenditures of Stockpiling Funds, Cumulative and by Fiscal Period Through December 31, 1968	31
Status of Obligational Operations as of December 31, 1968	32
Defense Mobilization Order 8600.1A, General Policies for Strategic and Critical Materials Stockpiling	34

INTRODUCTION

Under Presidential Executive Order 11051, the Director of the Office of Emergency Preparedness is authorized and directed to determine from time to time what materials are strategic and critical as well as the quality and quantities of such materials which shall be stockpiled. This report covers the principal activities in stockpile planning and management carried out during the period July 1 through December 31, 1968.

Policies governing stockpiling are established by the Director of the Office of Emergency Preparedness. On December 16, 1968, Defense Mobilization Order 8600.1, "General Policies for Strategic and Critical Materials Stockpiling" was revised and reissued as DMO 8600.1A. The principal change in this revised policy statement was the elimination of the stipulation that no reliance shall be placed on foreign sources of supply beyond North America and comparably accessible sources during an emergency. Future estimates of mobilization supplies will rely to some degree on previously discounted sources to the extent certified by the Joint Chiefs of Staff as accessible in an emergency and as approved by the Director. The full text of Defense Mobilization Order 8600.1A is shown on pages 34 and 35.

SUPPLY-REQUIREMENTS STUDIES-- CONVENTIONAL WAR

Conventional war stockpile objectives are based on a three-year war estimated

to begin not less than one or more than two years in the future. When present objectives were established, OEP determined the size and scope of the war effort by projecting the Gross National Product and its various components through the intervening years prior to the outbreak of the war and then through each of the three war years.

Revised GNP projections based upon new military estimates of mobilization requirements were completed in December 1968. Work on new supply-requirements studies for all stockpile materials was initiated immediately thereafter. These reviews should be completed and revised stockpile objectives announced before the end of 1969.

SUPPLY-REQUIREMENTS STUDIES-- NUCLEAR WAR

Work on reevaluating nuclear war stockpile objectives, established in January 1967, has been temporarily suspended pending the development of new estimates of the potential damage the U.S. might incur in a nuclear attack. With the completion of new damage estimates, work can be initiated on developing economic projections upon which a review of nuclear stockpile objectives will be based. It is estimated that the development of new nuclear war stockpile objectives will not be completed until sometime in FY 1970.

SUMMARY OF GOVERNMENT INVENTORIES OF STRATEGIC AND CRITICAL MATERIALS

As of December 31, 1968, the strategic materials held in all Government inventories amounted to \$6.9 billion at acquisition cost and approximately the same amount at market value. This is the first time since inventories have been compiled at market value (starting 1958) that the estimated market value of Government inventories has practically equaled the acquisition cost. Of the total, \$4.5 billion at cost was in the National Stockpile, \$1.4 billion in the Supplemental Stockpile, \$1.0 billion in the Defense Production Act inventory, and \$1.7 million in the Commodity Credit Corporation inventory. Of the total materials in Government inventories, approximately \$3.6 billion at cost or \$3.3 billion at estimated market value were

considered to be in excess of stockpile objectives as of December 31, 1968. Over 78 percent of the market value of that excess (\$3.3 billion) was made up of 11 materials: aluminum, bauxite (Jamaica and Surinam), metallurgical grade chromite, cobalt, industrial diamond stones, lead, metallurgical grade manganese, nickel, tin, tungsten, and zinc.

The following table is a summary of the total value of all materials carried in Government inventories including those with quantities in excess of established stockpile objectives as of the end of the year. It indicates the acquisition cost and estimated market value of materials with inventories meeting stockpile objectives, and materials with inventories excess to stockpile objectives.

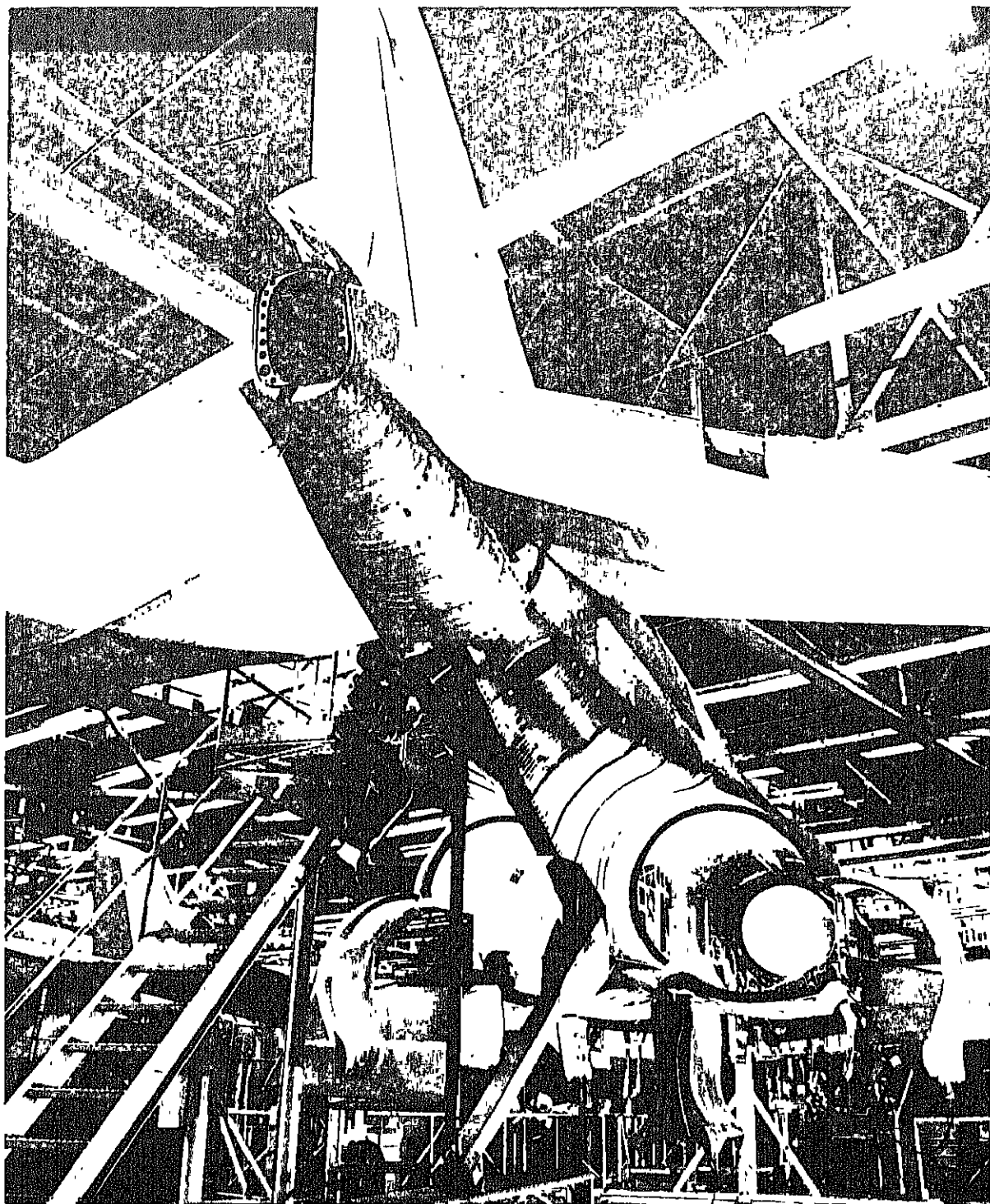
SUMMARY OF GOVERNMENT INVENTORIES OF STRATEGIC AND CRITICAL MATERIALS

December 31, 1968

	Short Tons (In Millions)	Acquisition Cost	Market Value ^{1/}
I. Total Inventories			
National Stockpile	23.1	\$4,471,408,600	\$4,875,947,700
Supplemental Stockpile	18.0	1,455,203,300	1,423,202,400
Defense Production Act	5.8	958,449,900	579,024,600
Commodity Credit Corporation . . . . .	.0	1,670,300	1,994,400
Total on Hand	46.9	6,886,732,100	6,880,169,100
On Order		85,356,800	93,852,100
II. Inventories Within Objective			
Total on Hand	27.3	3,312,118,400	3,608,694,700
III. Inventories Excess to Objective			
Total on Hand	19.6	3,574,613,700	3,271,474,400

^{1/} Market values are computed from prices at which similar materials are being traded currently; or, in the absence of current trading, an estimate of the price which would prevail in commercial markets. The market values are generally unadjusted for normal premiums and discounts relating to contained qualities. The market values do not necessarily reflect the amount that would be realized at time of sale.

Source: General Services Administration



This photo shows the titanium sub-structure of the McDonnell-Douglas F4 Phantom fighter. The Phantom employs titanium for 25% of the aft-fuselage weight, and in the latest models some 9% of overall fly-weight. The area depicted is subjected to elevated temperatures, heavy vibrations and loads.

STATUS OF STOCKPILE OBJECTIVES

The bar chart below shows the estimated market value of the objectives established and the extent to which materials on hand in all Government inven-

tories (National Stockpile, Supplemental Stockpile, DPA, and CCC) meet these objectives. The figures do not include the quantities on hand in all Government inventories which are in excess of stockpile objectives (\$3.3 billion).

STATUS OF STOCKPILE OBJECTIVES

AS OF DECEMBER 31, 1968

(In Billions of Dollars)

Market Value

OBJECTIVES



\$ 4.1

ON HAND
TOWARD
OBJECTIVES



\$ 3.6

The objective, inventory, excess, and balance of disposal authorizations, for each material on the Strategic and Critical Materials List, are shown in the following summary. As of December 31, 1968, total quantities of stockpile grade materials on hand and on order for all Government-owned inventories were in excess or equal to the stockpile objectives for 66 of the 77 basic materials on the List of Strategic and Critical Materials for Stockpiling. In addition to the specification grade materials, Government inventories contain nonspecification grades not credited to stockpile objectives. Much of the nonspecification grade materials in the National Stockpile was acquired by the transfer of Government-owned surpluses to the stockpile after World War II while others were accepted as contract termination

inventories. Several were of specification grade when acquired but no longer qualify due to changes in industry practices and other technological advances. Disposal action for practically all excesses shown in the following summary has been authorized by the Congress or, in the case of DPA materials, by the OEP. There are, however, a few materials for which disposal has been deferred pending new supply-requirements studies or improvement in market conditions. Certain technologically obsolete grades of materials now in inventory will be transferred to the disposal list as soon as new acquisitions are made of currently standard qualities. Inventory changes during the reporting period were due primarily to disposals, or to reclassification, upgrading, and other adjustments in the inventories.

SUMMARY OF GOVERNMENT INVENTORIES, OBJECTIVES,
EXCESSES AND BALANCE OF DISPOSAL AUTHORIZATIONS

Basic Stockpile Materials
As of December 31, 1968

(Market Value -- \$ Millions)

Commodity	Unit	Objective	Total Inventory ^{1/2/}	Market Value	Excess ^{2/}	Market Value	Balance of Disposal Authorization
1. Aluminum	ST	450,000	1,448,361	\$ 753.1	998,361	\$ 519.1	987,510 ^{3/}
2. Aluminum oxide, fused	ST	300,000	428,953	56.2	128,953 ^{4/}	16.6	128,955
3. Antimony	ST	25,500	49,197	42.6	23,697 ^{4/}	20.2	2,383
4. Asbestos, amosite ...	ST	40,000	65,311	13.8	25,311 ^{4/}	5.4	13,051
5. Asbestos, chrysotile .	ST	13,700	15,344	6.5	4,881 ^{4/}	.8	641
6. Bauxite, metal, Jamaica	LDT	5,000,000	8,858,881	103.1	3,858,881 ^{5/}	44.9	714,000
7. Bauxite, metal, Surinam	LDT	5,300,000	7,889,967	121.1	2,589,967 ^{5/}	39.8	0
8. Bauxite, refractory	LCT	173,000	197,912	8.5	24,912 ^{6/}	1.1	0
9. Beryl	ST	28,000	46,749	72.0	18,749 ^{6/}	16.2	6,920
10. Bismuth	LB	2,400,000	3,406,182	13.6	1,006,182 ^{7/}	4.0	813,500
11. Cadmium	LB	5,100,000	12,941,587	32.7	7,841,587 ^{7/}	19.8	2,635,792
12. Castor oil	LB	22,000,000	84,182,057	15.9	62,182,057	10.6	8,330,834
13. Celestite	ST	10,300	42,841	1.0	32,541 ^{5/}	.6	25,799
14. Chromite, chemical .	SDT	600,000	1,059,301	27.3	459,301 ^{5/}	11.8	116,458
15. Chromite, metallurgical....	SDT	2,970,000	6,014,848	434.9	3,044,848 ^{8/}	273.6	1,019,976
16. Chromite, refractory	SDT	1,425,000	1,426,671	21.7	1,671 ^{9/}	.02	0
17. Cobalt	LB	42,000,000	90,295,595	165.0	48,295,595 ^{9/}	87.4	12,638,252
18. Columbium	LB	1,176,000	11,886,629	18.1	10,710,629 ^{9/}	15.5	4,069,614
19. Copper	ST	775,000	268,471	230.3	709	.7	0
20. Cordage fibers, abaca	LB	50,000,000	117,892,865	21.8	67,892,865	12.6	62,910,973
21. Cordage fibers, sisal	LB	200,000,000	213,773,984	19.5	13,773,984 ^{5/}	1.3	8,682,104
22. Corundum	ST	2,500	1,964	.2	1,952 ^{5/}	.2	0
23. Diamond dies, small	PC	25,000	18,480	.7	442 ^{10/}	.02	0
24. Diamond, industrial bort	KT	24,700,000	42,611,479	101.4	17,911,479 ^{11/}	40.4	0
25. Diamond, industrial stones	KT	16,500,000	26,724,275	363.3	10,224,275 ^{8/}	133.2	1,769,650
26. Feathers and down ...	LB	3,000,000	3,553,173	12.4	553,173	1.0	0
27. Fluorspar, acid grade	SDT	540,000	1,123,858	59.4	233,858 ^{8/12/}	11.8	10,738
28. Fluorspar, metallurgical....	SDT	850,000	412,243	17.1	0	0	0
29. Graphite, natural, Ceylon	ST	5,500	5,886	1.3	386 ^{10/}	.09	0
30. Graphite, natural, Malagasy	ST	18,000	33,035	3.7	15,035	1.7	14,813
31. Graphite, other	ST	2,800	4,732	1.0	1,932	.4	1,409
32. Iodine	LB	8,000,000	8,011,839	9.5	11,839	.01	0
33. Jewel bearings	PC	57,500,000	54,729,525	23.0	14,726,696 ^{13/}	6.2	0
34. Kyanite, Mullite	SDT	4,800	4,820	.5	1,047 ^{4/}	.09	0
35. Lead	ST	0	1,164,603	302.8	1,164,603 ^{4/}	302.8	46,053
36. Magnesium	ST	90,000	144,195	103.8	54,195 ^{5/}	39.0	51,608

Commodity	Unit	Objective	Total Inventory $\frac{1}{2}$	Market Value	Excess $\frac{2}{/}$	Market Value	Balance of Disposal Authorization
37. Manganese, battery, natural	SDT	80,000	308,839	\$ 18.2	228,839 $\frac{4}{/}$	\$ 13.5	0
38. Manganese, battery, synthetic dioxide	SDT	6,700	24,675	12.1	17,975	8.8	16,972
39. Manganese ore, chemical A	SDT	68,500	146,914	10.3	78,414 $\frac{4}{/}$	5.5	0
40. Manganese ore, chemical B	SDT	64,000	100,838	5.0	36,838 $\frac{4}{/}$	1.8	0
41. Manganese, metallurgical....	SDT	7,900,000	12,817,012	424.8	4,917,012 $\frac{14}{/}$	172.0	2,556,397
42. Mercury.....	FL	200,000	200,266	107.3	266 $\frac{10}{/}$	.1	0
43. Mica, muscovite block, St./better.....	LB	6,000,000	15,435,505	61.9	8,594,805 $\frac{15}{/}$	21.4	7,197,080
44. Mica, muscovite film, 1 & 2 quality	LB	2,000,000	1,469,002	17.0	57,486	.06	6,420
45. Mica, muscovite splittings.....	LB	22,200,000	44,300,273	53.2	22,100,273	26.5	22,095,023
46. Mica, phlogopite block.....	LB	17,000	218,224	.06	201,505	.04	199,505
47. Mica, phlogopite splittings	LB	1,300,000	5,027,053	8.0	3,727,053	6.0	3,727,053
48. Molybdenum.....	LB	40,000,000	56,026,372	94.8	16,026,372 $\frac{5}{/}$	26.3	13,262,491
49. Nickel.....	ST	20,000	70,684	133.6	50,684	96.0	0
50. Opium.....	AVLB	143,000	143,556	12.1	2,042	.1	1,850
51. Platinum group, iridium.....	TrOz	17,000	14,121	2.6	184 $\frac{16}{/}$	.03	0
52. Platinum group, palladium.....	TrOz	1,300,000	1,050,100	48.3	7,981 $\frac{16}{/}$	.4	0
53. Platinum group, platinum.....	TrOz	335,000	450,076	55.4	115,076 $\frac{5}{/}$	14.1	0
54. Pyrethrum.....	LB	25,000	67,044	.7	42,044 $\frac{7}{/}$	.4	0
55. Quartz crystals.....	LB	650,000	5,292,509	56.4	4,642,509	48.9	4,639,267
56. Quinidine.....	OZ	2,000,000	1,600,438	2.8	0	0	0
57. Quinine.....	OZ	4,130,000	3,548,161	4.1	0	0	0
58. Rare earths.....	SDT	3,000	15,038	5.5	12,038 $\frac{17}{/}$	4.4	6,055 *
59. Rubber.....	LT	130,000	407,812	207.8	277,812 *	141.6	259,749 *
60. Rutile.....	SDT	200,000	50,927	6.3	0	0	0
61. Sapphire and Ruby...	KT	18,000,000	16,305,597	.2	0	0	0
62. Selenium.....	LB	475,000	474,774	2.1	0	0	0
63. Shellac.....	LB	8,300,000	11,320,777	4.2	3,086,567	.6	1,956,452
64. Silicon carbide, crude.....	ST	30,000	196,453	43.0	166,453 $\frac{4}{/}$	36.5	0
65. Silver..... (fine)	TrOz	165,000,000	165,000,000	313.5	0	0	0
66. Sperm oil.....	LB	23,400,000	23,393,158	2.9	0	0	0
67. Talc, steatite block & lump	ST	200	1,234	.4	1,034	.3	1,034
68. Tantalum.....	LB	3,400,000	4,541,855 $\frac{19}{/}$	42.8	1,141,855 $\frac{18}{/}$	6.4	0
69. Thorium oxide.....	LB	500,000	500,000	2.1 $\frac{19}{/}$	0	0	0
70. Tin.....	LT	200,000	257,765	923.8	57,765	207.0	57,121
71. Titanium sponge.....	ST	37,500	29,732	71.3	0	0	9,231 $\frac{20}{/}$
72. Tungsten.....	LB	44,000,000	185,592,986	511.0	141,592,986	391.7	42,533,459

Commodity	Unit	Objective	Total Inventory ^{1/2/}	Market Value	Excess ^{2/}	Market Value	Balance of Disposal Authorization
73. Vanadium.....	ST	1,500	5,609	\$ 21.9	4,109	\$ 13.9	3,972
74. Vegetable tannin, chestnut	LT	15,000	33,527	4.9	18,527	2.7	18,454
75. Vegetable tannin, quacbracho	LT	86,000	195,031	45.4	109,031	25.4	107,130
76. Vegetable tannin, wattle	LT	15,000	38,708	7.6	23,708	4.7	22,388
77. Zinc.....	ST	0	1,160,606	313.4	1,160,606	313.4	82,214

FOOTNOTES

- 1/ Total inventory consists of stockpile and nonstockpile grades.
 - 2/ Includes quantities that have been committed for sale but not shipped, as well as quantities of nonstockpile quality materials which may be held toward objectives.
 - 3/ Committed for sale but undelivered under long-term contracts.
 - 4/ Balance of excess held due to market impact.
 - 5/ Balance of excess pending Congressional approval or submission to the Congress.
 - 6/ Excess quantity includes 3,617 ST in beryllium copper master alloy and 3,160 ST in beryllium metal.
 - 7/ Balance of excess pending supply-requirements study.
 - 8/ Balance of excess deferred by the Congress due to market impact.
 - 9/ Unauthorized excess held pending completion of present sales program on DPA material.
 - 10/ Considered in balance.
 - 11/ Deferred due to foreign situation.
 - 12/ Excludes 350,000 SDT credited to metallurgical fluorspar.
 - 13/ Factory inspecting feasibility of reworking bearings to meet stockpile specifications.
 - 14/ Includes high carbon ferromanganese. Also includes quantity of metallurgical manganese ore retained for strategic reasons.
 - 15/ Excludes 840,700 LBS credited to mica, muscovite film.
 - 16/ Quantity being held for upgrading.
 - 17/ 5,200 SDT pending supply-requirements study.
 - 18/ Materials required in upgrading.
 - 19/ Includes 500,000 LBS thorium nitrate credited to thorium oxide objective, \$2.1 million market value.
 - 20/ Nonstockpile material.
- * Subsequent to the period covered by this report, rubber sales were terminated by OEP because of a new stockpile objective of 385,000 long tons, established on March 27, 1969.

ABBREVIATIONS

FL - Flask	OZ - Ounce
KT - Carat	PC - Piece
LB - Pound	SDT - Short Dry Ton
LCT - Long Calcined Ton	ST - Short Ton
LDT - Long Dry Ton	TrOz - Troy Ounce
LT - Long Ton	

OTHER MATERIALS IN
GOVERNMENT INVENTORIES

Inventories covering materials that
have been removed from the stockpile

list, and others for which there are no
stockpile objectives, are indicated in the
table below. These are not included in
the previous tabulation.

SUMMARY OF GOVERNMENT INVENTORIES AND BALANCE OF
DISPOSAL AUTHORIZATIONS COVERING MATERIALS FOR
WHICH THERE ARE NO STOCKPILE OBJECTIVES

As of December 31, 1968

(Market Value--\$ Millions)

Commodity	Unit	Total Inventory ^{1/}	Market Value	Balance of Disposal Authorizations
Antimonial lead	ST	10,336	\$ 3.1	10,336
Asbestos, crocidolite	ST	48,072	11.0	47,083
Colemanite	LDT	59,649 ^{2/}	.6	0
Diamond tools	PC	64,178 ^{3/}	.8	0
Mica, muscovite block, St. B/Lower . . .	LB	4,300,534	8.6	4,300,534
Mica, muscovite film, 3rd quality	LB	466,235	3.1	466,235
Platinum group metals, ruthenium. . .	TrOz	11,699 ^{2/}	.7	0
Silk noils	LB	30,099 ^{2/}	.02	0
Talc, steatite ground.	ST	3,900	.02	3,900
Thorium nitrate	LB	3,667,982 ^{4/}	15.3	3,138,861
Zirconium ore, baddeleyite	SDT	16,514	1.0	16,514
Zirconium ore, zircon.	SDT	1,720	.002	1,720

^{1/} Includes quantities that have been committed but not shipped.

^{2/} Total inventory committed.

^{3/} Deferred due to market impact.

^{4/} Includes 500,000 pounds credited to thorium oxide objective, \$2.1 million market value.



Aluminum, chrome and chrome-nickel alloys, copper and titanium are used in the FB-111A.

NATIONAL STOCKPILE ACTIVITIES

PROCUREMENT AND UPGRADING

The OEP Strategic Stockpile Procurement Directive for FY 1969, issued Oc-

tober 10, 1968, as amended October 28 and November 12, authorized the acquisition of the following strategic and critical materials:

<u>Material</u>	<u>Unit</u>	<u>Method of Acquisition</u>		
		<u>Cash</u>	<u>Upgrading</u>	<u>Exchange</u>
Asbestos, chrysotile . . . . .	.ST			3,300
Columbium, ferro.	Lbs-Cb		279,000 ^{1/}	
Iridium.	TrOz			3,100
Jewel bearings.	Pc	2,000,000		
Palladium.	TrOz			200,000
Quinidine . . . . .	.Oz			400,000
Rutile. . . . .	.SDT			20,000
Titanium sponge. . . . .	.ST			6,000 ^{2/}
Tungsten, ferro	Lb-W		300,000 ^{1/}	

^{1/} Acquisition authorized by either upgrading or through exchange of excess materials.

^{2/} Acquisition of titanium sponge limited to 6,000 short tons from domestic producers only.

Procurement - Cash

Jewel bearings. The Government-owned William Langer Jewel Bearing Plant, Rolla, North Dakota, continued to produce jewel bearings for the National Stockpile and for Defense contractors. The plant is operated by the Bulova Watch Company, Incorporated, under a nonprofit contractual and lease agreement with GSA.

On August 8, 1968, Public Law 90-469 was enacted. This legislation has made it possible for GSA to remove several limitations that have hampered the effective operation of the Langer Plant. The law authorizes GSA to operate the plant by contract or otherwise, and to finance its operation through a revolving fund.

Under a new management operating contract, to be negotiated, plant operations are to be revised to permit the use of the most effective and economically competitive business management

methods. Production of jewel bearings, now performed on a job order basis, will be changed, for the most part, to a continuous run basis. This will enable the facility to build and maintain a shelf inventory of jewel bearings which can be used to fill orders with a minimum of delay. It is expected that the new operation will reduce prices for jewel bearings.

Concurrently, Federal Procurement Regulation and Armed Services Procurement Regulation provisions governing the purchases of jewel bearings under Government contracts were being revised to direct more jewel bearing production requirements to the plant, thus enhancing its efficiency and capabilities.

Procurement - Exchange

Iridium. On December 19, 1968, a contract was entered into with Engelhard Minerals and Chemicals Corporation, Engelhard Industries Division, for

2,238 troy ounces of iridium for delivery on or before June 30, 1969. Payment for the iridium will be made with 9,200 troy ounces of ruthenium sponge which have been authorized for disposal from the stockpile.

Solicitations for offers for the remainder of the items authorized in the Procurement Directive either by exchange or upgrading are in various stages of completion and are scheduled for issuance during FY 1969.

Material on Order Prior to FY 1968

Palladium. The refining of subspecification palladium under a previous contract has been completed with the recovery of 7,687 troy ounces of palladium, 8 fine troy ounces of gold, and 85 fine troy ounces of silver.

Ferromanganese - Palladium. Under a contract entered into on August 31, 1967, for the acquisition of 200,000 troy ounces of palladium and the upgrading of manganese ore to 36,000 short tons of medium carbon ferromanganese, deliveries through June 30, 1968, have totaled 200,060 troy ounces for palladium and 14,222 short tons for ferromanganese. The processing of manganese ore to ferromanganese is continuing under the contract with final delivery to be made not later than June 30, 1971.

Ferrocolumbium. Under a contract entered into on June 5, 1968, for the conversion of Government-furnished columbium concentrates to ferrocolumbium containing not less than 186,000 pounds of columbium, deliveries through December 31, 1968, have totaled 93,871 pounds. The processing of columbium concentrates to ferrocolumbium is continuing under the contract with final deliveries to be made in early February 1969.

Silicomanganese. Under a contract entered into on June 28, 1968, for the conversion of Government-furnished manganese ore to 45,500 short tons of

silicomanganese, deliveries through December 31, 1968, totaled 1,531 short tons. The processing of manganese ore to silicomanganese is continuing under the contract with final deliveries to be made by June 15, 1970.

DISPOSAL PROGRAM ACTIVITY

While there was some improvement in the sales of selected excess during July-December, disposal sales in general continued at virtually the same moderately slow pace as the previous year. Magnesium and beryl ore were added to the available list as new Congressional legislation was enacted. Out of a total of 56 materials authorized and available for sale from Government inventories, only 39 materials contributed to the total sales.

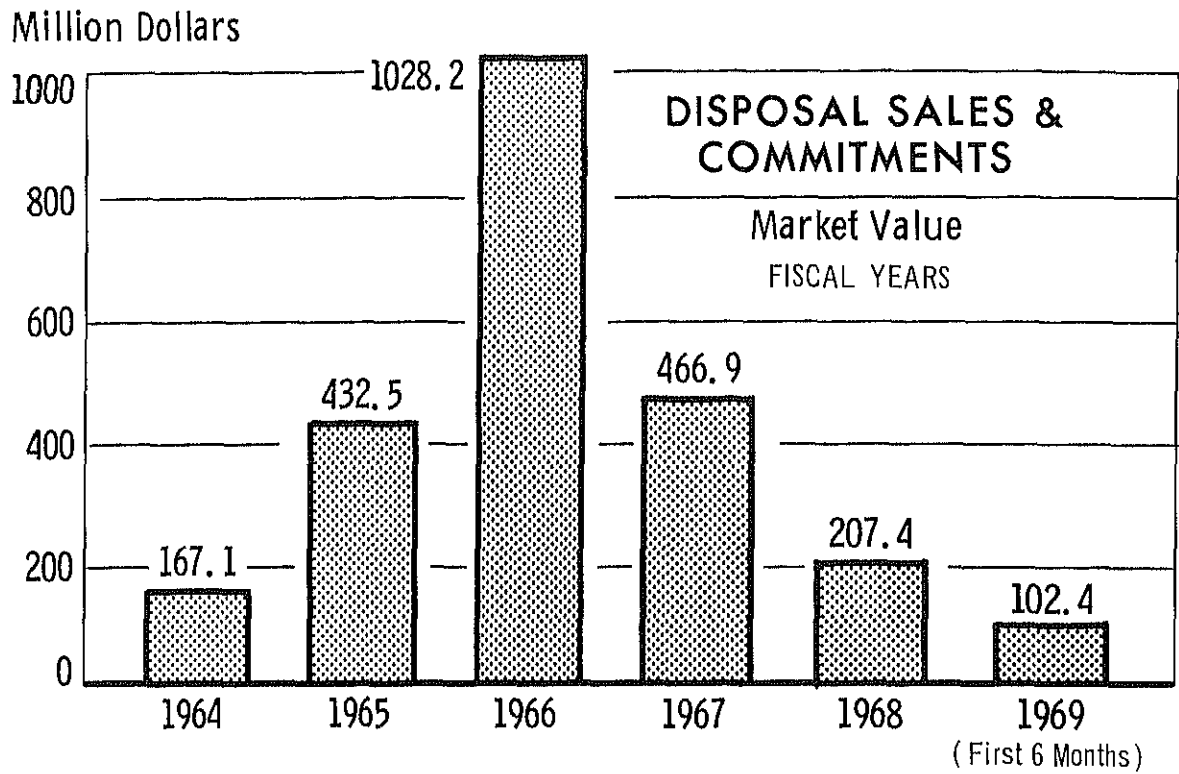
SALES COMMITMENTS

Sales commitments during the period amounted to \$102.4 million - a slight increase over the \$85.3 million realized in July-December 1967. Of the total \$102.4 million, \$51.9 million were from the National and Supplemental Stockpiles, \$10.3 million from the Defense Production Act inventory, and about \$40.2 million from other sales (lithium, mercury, and silver). Of the \$40.2 million, silver sales made on behalf of the U.S. Treasury Department, pursuant to Public Law 90-29, accounted for approximately \$35.2 million. The \$35.2 million represent the amount realized in excess of the monetary value of \$1.2929 per ounce.

During January-June 1968, disposals amounted to \$122.1 million, making the total of \$224.5 million for calendar year 1968. Cumulative sales since the inception of the disposal program in 1958 reached approximately \$3.0 billion. (Figures 1 and 2.)

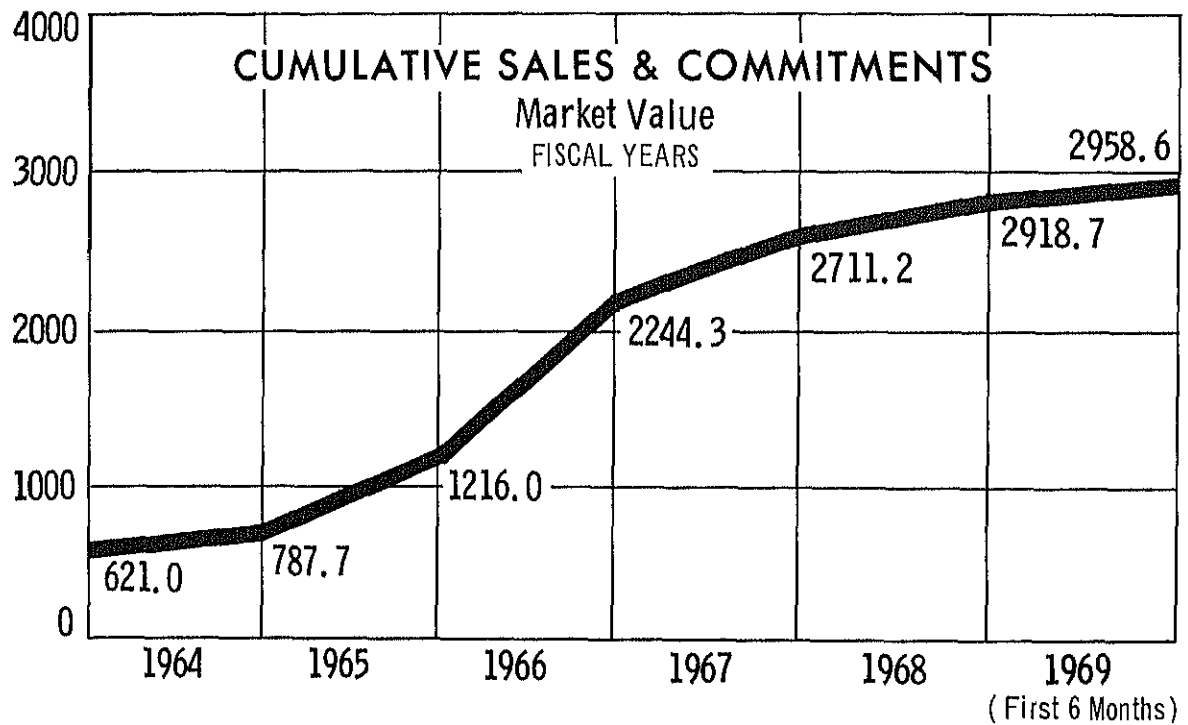
A list of the materials sold during July-December is shown in the table which follows on page 13.

Figure 1



Million Dollars

Figure 2



DISPOSALS OF STRATEGIC AND CRITICAL MATERIALS

July-December 1968

Material	Unit	Sales Commitments			Total Sales Value
		Quantity	Government Use	Industrial Use	
NATIONAL AND SUPPLEMENTAL STOCKPILE INVENTORIES:					
Aluminum.....	ST	20,074	\$	\$10,541,894	\$10,541,894
Antimony	ST	210		167,250	167,250
Asbestos, amosite.....	ST	1,250		218,700	218,700
Beryl.....	ST	2,968		1,728,238	1,728,238
Bismuth	LB	96,500		386,000	386,000
Cadmium	LB	699,998		1,771,096	1,771,096
Castor oil	LB	13,617,230		2,165,482	2,165,482
Celestite	ST	2,749		43,533	43,533
Chromite, metallurgical.....	SDT	141,987		3,218,465	3,218,465
Cordage fiber, abaca.....	LB	5,415,025	381,054	353,392	734,446
Cordage fiber, sisal	LB	7,052,726		534,844	534,844
Fluorspar, acid grade.....	SDT	1,677		22,639	22,639
Graphite.....	ST	1,053		136,113	136,113
Lead	ST	294	71,679		71,679
Magnesium.....	ST	3,502	290,000	1,907,200	2,197,200
Manganese battery grade.....	SDT	1,000		320,000	320,000
Manganese, metallurgical.....	SDT	11,744		217,492	217,492
Mica	LB	141,100		76,591	76,591
Opium	AvLb	104		1,679	1,679
Platinum - Ruthenium.....	TrOz	9,500	12,000	397,216	409,216
Quartz crystals.....	LB	28,839	7,150	151,950	159,100
Rare earth.....	ST	766		308,408	308,408
Rubber	LT	45,550	19,220,581		19,220,581
Shellac	LB	1,396,033		162,416	162,416
Talc.....	ST	10		1,600	1,600
Tin.....	LT	1,648	5,198,431		5,198,431
Vegetable Tannins:					
Chestnut	LT	65		9,128	9,128
Quebracho.....	LT	300	60	68,521	68,581
Zinc	ST	6,682	1,744,043	98,550	1,842,593
Total National and Supplemental Stockpiles.....			\$26,924,998	\$25,008,397	\$51,933,395

DISPOSAL OF STRATEGIC AND CRITICAL MATERIALS

July - December 1968 (Continued)

Material	Unit	Sales Commitments			Total Sales Value
		Quantity	Government Use	Industrial Use	
DEFENSE PRODUCTION ACT INVENTORY:					
Aluminum.....	ST	6,627	\$	\$ 3,484,249	\$ 3,484,249
Asbestos, chrysotile.....	ST	1,062		169,898	169,898
Cobalt.....	LB	1,916,895		3,286,381	3,286,381
Columbium.....	LB	155,045		198,528	198,528
Fluorspar, acid grade.....	SDT	7,115	57,000	213,612	270,612
Manganese, metallurgical.....	SDT	5,540		77,705	77,705
Mica, muscovite block.....	LB	16,820		33,519	33,519
Tungsten.....	LB	1,055,217		2,744,141	2,744,141
Total DPA.....			\$ 57,000	\$10,208,033	\$ 10,265,033
OTHER:					
Lithium.....	LB	6,875		1,375	1,375
Mercury.....	FL	9,543	578,000	4,427,345	5,005,345
Silver..... (Fine) TrOz				35,178,576 ^a	35,178,576
Total OTHER.....			\$ 578,000	\$39,607,296	\$ 40,185,296
GRAND TOTAL.....			\$27,559,998	\$74,823,726	\$102,383,724

^aRepresents that portion of the total proceeds in excess of the U.S. monetary value based on \$1.2929 per ounce. 50,822,630 ounces of silver were sold at an average price of \$1.9851.

LEGISLATION RELATIVE TO
STOCKPILE DISPOSALS

Two legislative items authorizing disposals from the National and Supplemental Stockpiles with an estimated sales value of \$40.0 million were enacted during the July-December period. The President signed Public Law 90-

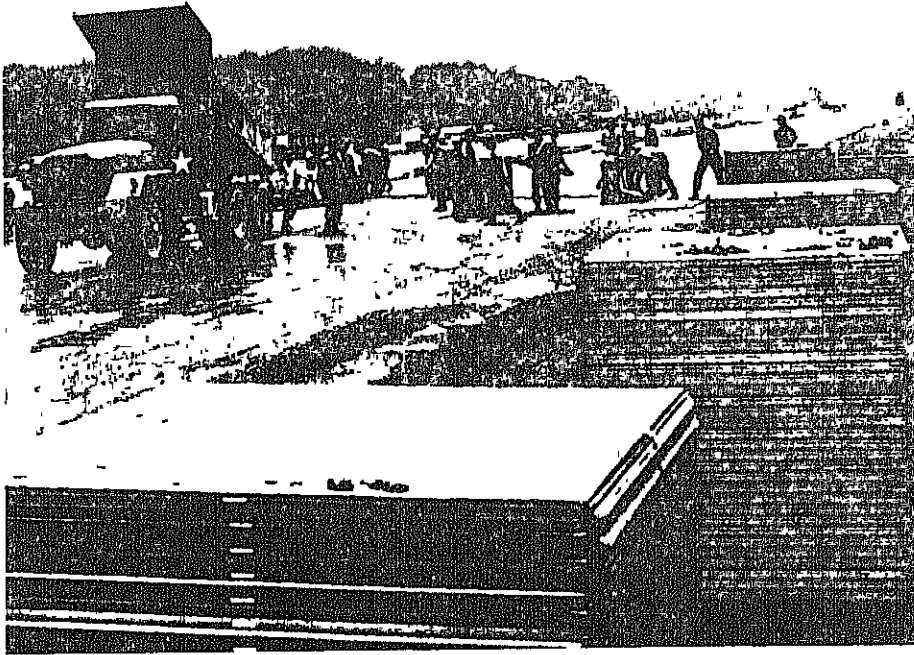
478 on August 11, 1968, covering 9,888 short tons of beryl ore, and on October 18, 1968, Public Law 90-604, which covered 55,000 short tons of magnesium. Five other materials, with an estimated sales value of \$148.5 million, were awaiting final Congressional action at the time of adjournment. The status of these actions is indicated in the following table:

<u>Legislation Enacted</u>					
<u>Material</u>	<u>Unit</u>	<u>Quantity</u>	<u>Market Value</u> (\$ Millions)	<u>Number</u>	<u>Action Date</u>
Beryl	ST	9,888	\$ 4.2	PL-478	8-11-68
Magnesium	ST	55,000	35.8	PL-604	10-18-68
<u>Legislation Approved by the House and Denied by the Senate Committee</u>					
Nickel	LB	60,000,000	\$55.5	HR 5786	6-8-67 ^{1/}
<u>Legislation Passed by House and Amended by Senate Pending House Committee Action</u>					
Platinum	TrOz	115,000	\$12.8	HR 5789	4-26-68 ^{2/}
<u>Legislation Pending House Action At Adjournment</u>					
Bauxite, metallurgical	LDT	5,400,000	\$71.1	HR 7185	3-14-67 ^{3/}
Castor oil	LB	46,000,000	8.8	HR 15862	3-11-68
Corundum	ST	1,952	0.3	HR 15861	3-11-68

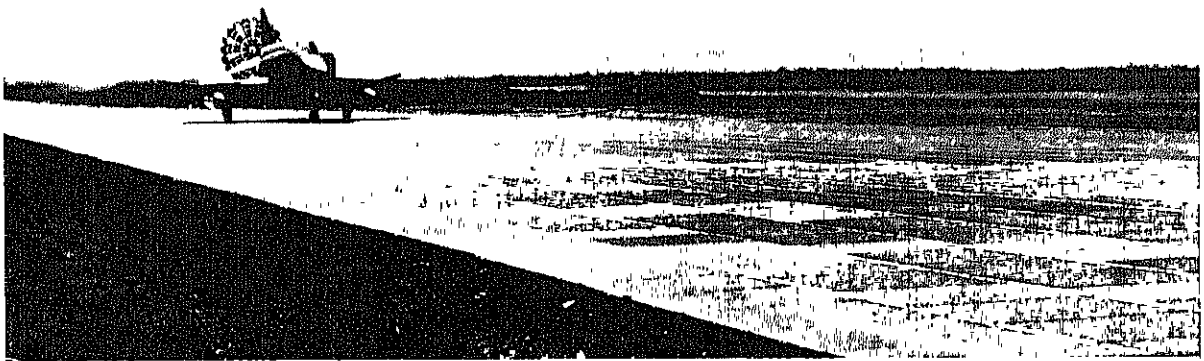
^{1/} House approved April 20, 1967; Senate Armed Services Committee voted not to report bill June 8, 1967.

^{2/} Amended by the Senate.

^{3/} Private bill introduced by Congressman Charles H. Wilson of California; no action taken.



Aluminum landing mats being assembled in Vietnam.



Aluminum landing mats in use.

NOTES ON STRATEGIC AND CRITICAL MATERIALS DISPOSAL ACTIVITIES JULY-DECEMBER 1968

Aluminum

Sales commitments of primary aluminum under the November 1965 long-term purchase agreements amounted to 26,701 short tons, valued at \$14.0 million, in the July-December period. Sales fell somewhat short of those in the previous six months, which came to 31,212 short tons, valued at \$15.5 million, but they did show a marked gain over the 2,041 short tons sold in the July-December 1967 period. As of the end of the reporting period, cumulative sales, since the inception of the sales program, amount to 460,959 short tons leaving approximately 987,510 short tons to be taken pursuant to Government contracts with major producers.

Castor Oil

Under procedures set forth in the Federal Register in 1961, castor oil is offered in approximately equal amounts at a rate not to exceed 30 million pounds annually, at intervals of no less than 60 days. In the period ending December 31, 1968, sales continued strong, totaling 13.6 million pounds, valued at \$2.2 million, leaving approximately 8.3 million pounds for sale from the total 155.7 million pounds authorized by the Congress in June 1962. There is every indication that this quantity will be exhausted before the end of FY 1969. Legislative proposal for the release of an additional 46 million pounds of excess castor oil from the National Stockpile was pending at the close of the 90th Congress. Resubmission was made to the 91st Congress in early January.

Chromite

Metallurgical grade chromite turned out to be one of the more important re-

nue producers during the first half of FY 1969. The embargo on chrome imports from Rhodesia has affected the U.S. supply. Sales commitments for the period totaled about 142,000 short dry tons, for a value of \$3.2 million. In FY 1968, sales of this material came to only 12,610 short tons, valued at \$295,667. Three long-term contracts were negotiated in December 1968 after two unsuccessful sealed-bid offerings were made in October and December. Of the 885,000 short tons of metallurgical chrome authorized by the Congress in May 1966, approximately 821,900 tons, valued at \$19.3 million, have been delivered or committed for sales under long-term contracts with major producers and traders, leaving about 58,000 tons, after adjustment, available for sale.

Cobalt

In April 1968, a change was made in the cobalt disposal program which provided for the sale by sealed-bid of up to one million pounds of cobalt in each quarter. During the July-December period, the dollar volume of such sales reached approximately \$3.3 million for 1.9 million pounds of cobalt. Demand for stockpile cobalt continued relatively strong, and the average price per pound of cobalt sold during the reporting period ran one or two percent higher than the fixed prices at which cobalt was sold in FY 1968.

Magnesium

The President signed the magnesium disposal bill (PL 90-604) on October 18, 1968, authorizing the release of 55,000

short tons, valued at \$35.8 million, from the National Stockpile. The first sealed-bid offering of 5,000 tons in November 1968 resulted in awards for 3,002 tons. There was an additional sale of magnesium to the Atomic Energy Commission, bringing the total for the first half of FY 1969 to 3,502 short tons, valued at \$2.2 million. Growing commercial applications of magnesium are closely related to growth in the aluminum industry, magnesium being the main alloying metal. The availability of stockpile material has helped fill the gap created by the increased rate of consumption, and has precluded purchases abroad by the major producers.

Rubber

Sales of rubber picked up in the reporting period as the Government continued its policy of limiting sales to actual Government-use programs or 70,000 long tons, whichever is higher. Sales amounted to 45,550 long tons, valued at \$19.2 million, compared with 33,065 long tons, valued at \$11.7 million, sold in the January-June period in 1968. Foreign aid programs to Korea and Turkey contributed substantially to the July-December sales. All the sales of rubber in each of these periods were generated by Government-use programs including DOD trucks and aircraft tires, retreading, and AID programs. Since the inception of the rubber disposal program in 1959, approximately 819,930 long tons, valued at \$447.3 million, of the total 1,090,000 long tons authorized by the Congress have been sold. (Subsequent to the period covered by this report, rubber sales were terminated by OEP because of a new stockpile objective of 385,000 long tons, established on March 27, 1969.)

Silver

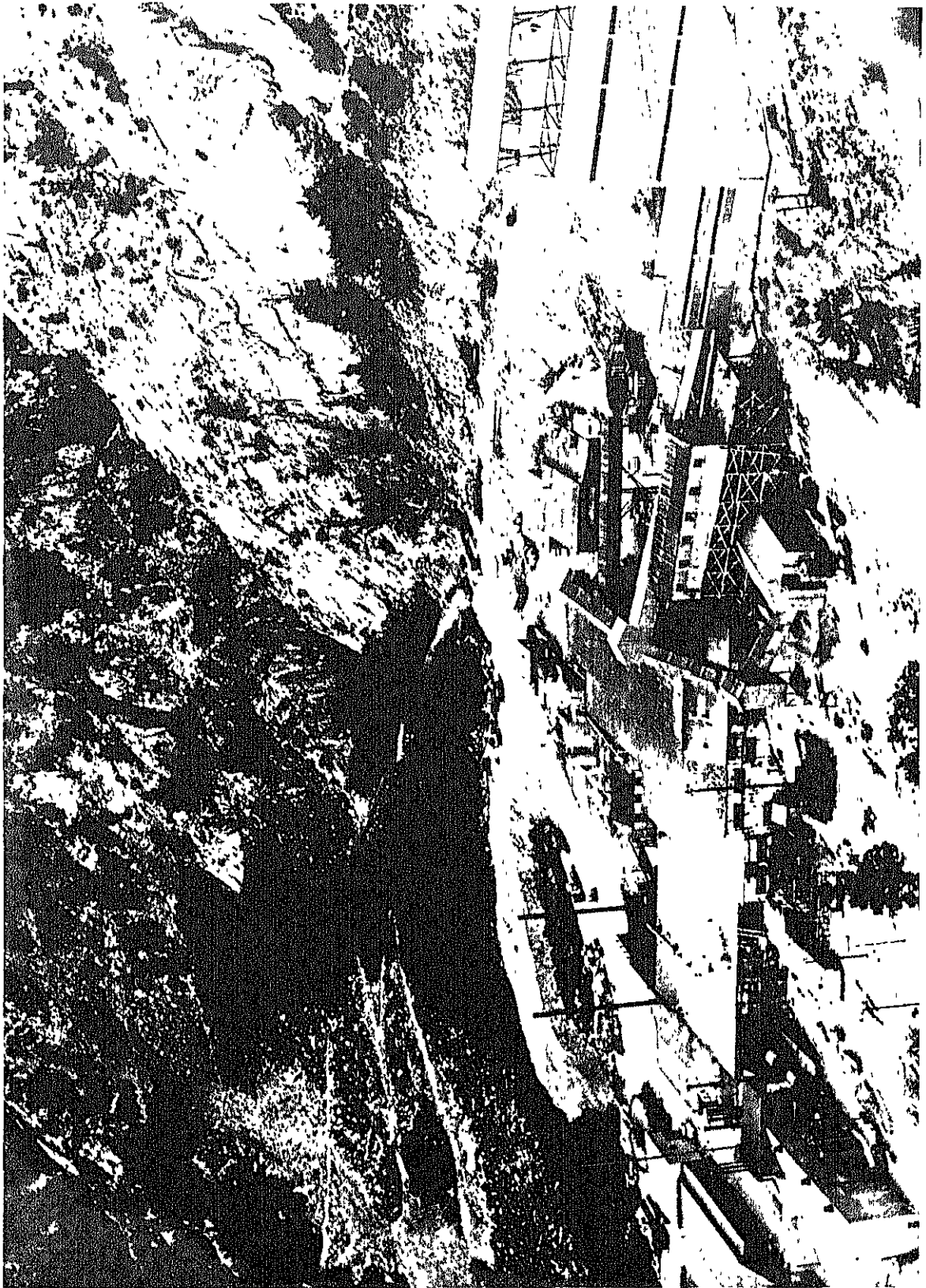
Acting on behalf of the Treasury Department, GSA sold 50.8 million fine troy ounces of silver, realizing a gross of \$100.9 million. Of this amount, \$35.2 million represent the market value of the silver sold in excess of the monetary value of \$1.2929 per troy ounce. Since the inception of the sealed-bid sales on August 4, 1967, a total of 148.5 million troy ounces has been sold for \$289.6 million.

Tin

For the third six-months period in succession, sales of tin were at the lowest level since disposals of this commodity began in 1962. Sales for the period were restricted to the foreign aid program totaling 1,648 long tons with a value of \$5.2 million. However, tin remained one of the more important revenue earners in the stockpile. In the previous six months, 1,860 long tons were sold for \$6.2 million. Effective July 1, 1968, GSA announced the suspension of commercial tin sales pending a study of the world market conditions.

Tungsten

Demand for tungsten from the stockpile eased somewhat in the reporting period, while the market price held steady, indicating that supplies were not as tight as they had been in the previous January-June period. Sales amounted to 1.1 million pounds, valued at \$2.7 million, which closely paralleled the sales of 1.0 million pounds, valued at \$2.6 million, in the July-December period of 1967. In the intervening six months, sales reached 2.1 million pounds, valued at \$5.3 million.



Tungsten mine and mill.

ACTIVITIES OF THE GENERAL SERVICES ADMINISTRATION RELATING TO STOCKPILING OF STRATEGIC AND CRITICAL MATERIALS

The General Services Administration is charged with the general operating responsibility, under policies set forth by the Office of Emergency Preparedness, for stockpile management, including (1) purchasing and making commitments to purchase, transferring, rotating, upgrading, and processing of metals, minerals, and other materials; (2) expansion of productive capacity through the installation of additional equipment in Government-owned plants and the installation of Government-owned equipment in privately-owned facilities; (3) storage and maintenance of all strategic materials held in Government in-

ventories; and (4) disposal of excess stockpile materials, including the development of disposal plans, selling the materials and providing for Government-use of such materials.

The activities of the General Services Administration, particularly in connection with procurement, upgrading, and disposals, have been summarized in the earlier sections of this report.

STORAGE AND MAINTENANCE

On December 31, 1968, there were 46.9 million tons of strategic materials stored at 144 locations as follows:

	As of December 31, <u>1968</u>	Change in last <u>6 months</u>
Military depots	36	
GSA depots	30	
Other Government-owned sites	18	+2
Leased commercial sites	14	
Industrial plantsites	39	
Commercial warehouses	<u>7</u>	<u>-1</u>
Total	144	+1

The silver transferred to the stockpile from the U.S. Treasury Department in June 1968, is stored in three Treasury vaults, two of which are new stockpile locations. One commercial warehouse in Amsterdam, New York, used for storing strategic material was evacuated during the period.

A total of 225,000 tons of excess materials was shipped from depots during the reporting period due to disposal

programs. These shipments, together with interwarehouse transfers, enabled the reduction of storage functions at GSA depots in Sharonville, Ohio; Hammond, Indiana; Somerville, New Jersey; Bethlehem, Pennsylvania; and Clearfield, Utah, for an annual savings in recurring storage costs of \$621,000. In addition, 1,849 tons of rubber and cordage fiber were removed from commercial warehouses for an annual savings of \$12,000.

ACTIVITIES OF THE DEPARTMENT OF COMMERCE RELATING TO STOCKPILING OF STRATEGIC AND CRITICAL MATERIALS

RESPONSIBILITIES

The Department of Commerce has been delegated a number of responsibilities with regard to the National Stockpile and these in turn have been assigned to the Business and Defense Services Administration within the Department. BDSA prepares for the Office of Emergency Preparedness estimates of essential civilian and war-supporting requirements for strategic materials in a mobilization period, a basic element in determining stockpile objectives. In certain limited cases, it also prepares estimates of the mobilization supply of such materials. It reviews plans for disposal of surplus stockpile materials and it provides OEP or GSA with its evaluation of the market impact of proposed schedules of sales. In addition, it develops recommendations in the matter of purchase specifications and storage procedures. It also prepares special studies for OEP regarding strategic material problems and, in general, submits to OEP on behalf of the Department recommendations or advice on stockpile policies and programs.

ESSENTIAL CIVILIAN AND WAR-SUPPORTING REQUIREMENTS

During the first three months of the reporting period, BDSA completed most of the remaining studies of mobilization requirements for items in the stockpile, as scheduled under the program initiated in 1967. However, in October and November 1968, OEP prepared a new economic model for a later mobilization period. Based on this new model, it revised the guidelines for estimating requirements with BDSA assisting in several aspects of the work.

With these guidelines at hand, BDSA undertook a new program for the review of estimates of mobilization requirements. Requirements studies covering

21 items in the stockpile were completed in the month of December and sent to OEP. This brought the total of studies sent to OEP for the half year to 28. They included the following:

- Cadmium (2)
- Castor oil
- Chromite, chemical grade
- Corundum
- Diamond bort
- Feathers and down (2)
- Fluorspar, metallurgical grade
- Iodine
- Kyanite
- Mercury (2)
- Mica, muscovite splittings
- Mica, phlogopite block
- Mica, phlogopite splittings
- Quartz crystals
- Quinine
- Quinidine
- Rare earths (2)
- Selenium
- Shellac
- Talc
- Thorium
- Vegetable tannins, chestnut
- Vegetable tannins, quebracho
- Vegetable tannins, wattle

DISPOSAL PROGRAM

BDSA continued its active review of disposal programs and its preparation of recommendations during the period under consideration. Altogether 29 submissions, covering 22 items, were sent to GSA.

Many were required as a result of changes in the supply-demand situation during the program year and some represented belated reviews of disposals for which the program year ended June 30, 1968. Others were related to increasing the surplus availability by obtaining Congressional approval for the release or sale from the stockpile of

newly developed or residual surpluses.

The following items were covered:

Abaca
Asbestos, chrysotile
Beryl
Castor oil
Chromite, metallurgical grade
Columbite (2)
Diamond bort
Fluorspar, acid grade
Graphite, other than Ceylon and Malagasy
Magnesium
Mercury (3)
Mica, muscovite block
Mica, muscovite block and film
Mica, muscovite film (2)
Mica, muscovite splittings (2)
Mica, phlogopite block (2)
Mica, phlogopite splittings (2)
Molybdenum
Platinum
Ruthenium
Silicon carbide
Tungsten

HIGH-HEAT ALLOYS AND SPECIAL PROPERTY MATERIALS

In accordance with the provision of Defense Mobilization Order 8600.1A, BDSA prepares annually for OEP a report on the wartime supply-requirements situation for selected high-heat alloys and special property materials which are capable of being stockpiled. Criteria for these studies assume reasonably firm requirements and the preparation of a detailed analysis if there is evidence of a prospective deficit.

The survey covered 18 specific items ranging from boron filaments to zirconium. In addition, the chemical field was briefly examined. With the exception of two cases, the prospective supply appeared to be adequate for indicated wartime needs, after taking into account technological trends and developments. In two cases, rhenium and hafnium, the potential for expansion of supply was so bleak that no provision could be made

for utilizing their properties in wartime over and above present essential usage.

Items reviewed included the following:

Beryl
Boron
Cerium
Cesium
Columbium
Gallium
Germanium
Graphite, artificial, high grade
Hafnium
Indium
Silicon, high purity
Rhenium
Rubidium
Tantalum
Tellurium
Titanium
Vanadium
Zirconium

STOCKPILE PURCHASE SPECIFICATIONS AND SPECIAL STOCKPILE INSTRUCTIONS

The importance of updating stockpile purchase specifications to assure that materials being stockpiled are suitable for efficient wartime production is the basis for BDSA's program for reviewing all such specifications over a two-year period. The Special Stockpile Instructions which provide for crediting materials to the objectives, retention of types of materials during disposal programs, and appropriate packaging for storage have a similar importance. They also are being updated. Nineteen revisions of these documents were submitted to OEP but it is expected that such submissions will be accelerated over the next few months. Recommendations regarding revisions covered the following items:

PURCHASE SPECIFICATIONS

Aluminum
Bauxite, metal grade
Castor oil

Graphite, Malagasy
Magnesium
Mica, muscovite block
Mica, muscovite film
Mica, phlogopite block
Opium
Titanium

SPECIAL INSTRUCTIONS

Aluminum
Bauxite, metal grade
Castor oil
Diamonds, industrial (stones and bort)
Graphite, Malagasy
Magnesium
Mica, muscovite block
Mica, muscovite film
Mica, phlogopite block

SPECIAL STOCKPILE STUDIES AND RELATED ACTIVITIES

In addition to the above, BDSA prepared for OEP and GSA studies related to stockpiling as follows:

Listings of Consumers of Stockpile Items.—For improved mobilization planning, OEP had requested BDSA to supply lists of consumers of 16 stockpile items together with addresses and consuming patterns of each firm. Additional comments on special circumstances affecting the consuming patterns were to be provided as necessary. During the reporting period, data on sebacic acid and pyrethrum were sent to OEP. These submissions completed the list of items requested by OEP.

Production Capacity of the Steel Industry.—As part of OEP's development of a new economic model for the assumed war period and preparation of related guidelines for estimating mobilization requirements, BDSA provided an estimate of steel production capacity for the three wartime years. The estimate included a breakdown for carbon steel, alloy steel and stainless steel, both in ingot form and its total product equivalent, as well as a breakdown by type of furnace - open hearth, electric and basic oxygen.

Ferroalloys.—BDSA has been delegated responsibility for assisting OEP in its examination of a claim by the Committee of Producers of Ferroalloys and Related Products that imports of ferroalloys were impairing--or threatening to impair--national security. In carrying out this responsibility, BDSA has assembled much data covering domestic production, consumption, imports and exports of all principal ferroalloys over a period of years. It has also related present and prospective demands to plant capacity for various types of ferroalloys, and it has examined price trends, availability of labor, economic aspects of the industry, and other factors bearing on the problem. Further work is being done on the techniques of production and on an analysis of the ferroalloy situation in time of war.

Tin.—In the course of assessing the potential for the disposal of surplus tin from the National Stockpile, GSA requested BDSA to prepare an estimate of tin usage by Government agencies other than DOD. It was found that specific data could not be obtained without a costly and time-consuming survey. However, an estimate was developed by using the relationship of DOD's tin requirements and its procurement program as a measure of tin consumed in the procurement programs of other agencies.

Asbestos.—At the request of GSA, BDSA examined the dangers which might result from handling asbestos stored in Government stockpiles with a view to establishing appropriate storage directions. Both from scientific research and industry experience, it appeared that the danger resulting from inhalation of asbestos dust and contact with it was much more serious than previously thought. As a result, more thorough handling precautions were stipulated in a recommendation to GSA regarding storage procedures for this material. These precautions will also be reflected in a revised Special Stockpile Instruction to be submitted to OEP for approval.

ACTIVITIES OF THE DEPARTMENT OF STATE RELATING TO STOCKPILING OF STRATEGIC AND CRITICAL MATERIALS

The Department of State provides guidance regarding the effects of stockpiling program activities on U.S. foreign relations and deals with problems which may arise out of these activities.

The Department participates with other agencies in the periodic review of the supply and demand situation for each of the stockpiled materials and in the development of related stockpile objectives. It also provides estimates of reliability of foreign sources of supply in time of national emergency.

In regard to the disposal of surplus materials from the stockpile, the Department shares in the development of disposal plans suited to the particular situation in each material and conducts appropriate consultations with interested foreign governments about each plan. Based on these consultations, an evaluation is made of the political and economic effects of disposals on friendly foreign countries and on foreign relations of the United States. As neces-

sary, recommendations are made for the adoption or modification of the proposed disposal plans.

The Department participates in the review of proposals to barter U.S. surplus agricultural products for strategic materials which may be delivered to the stockpile; it assists in advising the Department of Agriculture on foreign policy problems arising from the conduct of such programs.

In the period July-December 1968, the Department conducted numerous consultations with foreign governments concerning new disposal plans and modification of existing programs. In addition, it responded to representations made by foreign governments concerning the effects of disposal programs on their trade.

The advisory role of the Department in the stockpiling and disposing of strategic and critical materials was enhanced by its active role in various international commodity groups.

ACTIVITIES OF THE DEPARTMENT OF AGRICULTURE RELATING TO STOCKPILING OF STRATEGIC AND CRITICAL MATERIALS

COTTON TRANSFERRED FROM STOCKPILE FOR DISPOSAL

There were 10,623 bales of domestic grown extra-long staple cotton in the National Stockpile as of December 27, 1968. This is a reduction of 18,686 bales during the report period. The remainder is about seven percent of the stockpiled cotton which GSA transferred to the Commodity Credit Corporation in 1962.

BARTER ACTIVITIES

No barter contracts for strategic materials for subsequent transfer to the Supplemental Stockpile were signed during July-December 1968. During this period, strategic materials valued at \$0.8 million were delivered to the Commodity Credit Corporation under contracts signed prior to July 1968, bringing the cumulative total of strategic materials delivered to CCC since 1950 to

approximately \$1.6 billion. Of this total, through December 31, 1968, \$223.3 million in strategic materials have been transferred to the National Stockpile and about \$1.4 billion to the Supplemental Stockpile.

EXPANSION OF DOMESTIC SOURCES OF SUPPLY

The following drug plant seeds continue to be maintained in storage at the National Seed Storage Laboratory, Fort Collins, Colorado:

- 8 lots of Atropa belladonna.
- 9 lots of Digitalis lanata.
- 2 lots of Digitalis purpurea.
- 8 elite lines of Papaver somniferum.

The stocks are considered sufficient to meet the minimum national production needs in the event of an emergency. Stocks will be rejuvenated periodically whenever they reach a critical stage of low viability.

ACTIVITIES OF THE DEPARTMENT OF THE INTERIOR RELATING TO STOCKPILING OF STRATEGIC AND CRITICAL MATERIALS

The Department of the Interior is responsible for the management, conservation, and development of the Nation's natural resources to meet the requirements of national security and an expanding economy. The Department provides advice and assistance to the Office of Emergency Preparedness in formulating and carrying out programs for the stockpiling of strategic and critical materials. The Department of the Interior conducts research in exploration, mining, beneficiation, and metallurgy and compiles information on production and consumption for use in stockpile planning.

The Department is responsible for emergency preparedness planning with

FOREST PRODUCTS RESEARCH

Forest products research has resulted in improvements in packaging materials and techniques. Such findings may be applicable to the handling and storing of stockpiled items. For example, studies reveal that serviceable pallets can be made from Appalachian oaks, hickory and yellow poplar. These species comprise about 63 percent of the hardwoods in this area. Over 2-1/2 billion board feet of lumber were used by the pallet market in 1966, and currently there is extremely heavy demand for hardwood pallets by the Department of Defense. Wider use of the three Appalachian species can help combat shortages in the pallet lumber supply and contribute to a better economy in Appalachia.

Recent investigations have shown that there are important container - related effects in the use of urethane foam for cushioning packages. Data on the response of package cushioning material to mechanical shock are generally available to the package designer.

respect to strategic metals and minerals and other resources and conducts supply-requirements studies when market conditions or other circumstances indicate problem areas in which materials are likely to be in short supply and recommends appropriate action to overcome deficiencies. The Department also administers programs to encourage the exploration, development, and mining of minerals and metals for emergency purposes.

STOCKPILE DISPOSALS

The Department continued to cooperate in the formulation of programs for the

disposal of surplus Government inventories of strategic and critical materials. Representatives of the interested industries were consulted as problems arose and plans were developed and revised.

RUTILE EXPANSION PROGRAM

Under the Domestic Rutile Expansion Program established by the Office of Emergency Preparedness, the Bureau of Mines and Geological Survey continued to analyze samples of ores for their rutile content. Investigations of processes under development by industry for producing substitutes for natural rutile from ilmenite also continued, as well as the program for use testing of manufactured rutile.

Under an amendment to the contract with the Office of Minerals and Solid Fuels, the Battelle Memorial Institute is producing columbium-bearing rutile concentrate from Magnet Cove, Arkansas, for end-use testing.

OTHER ACTIVITIES

The Bureau of Mines' efforts to develop a technically feasible process for the treatment of the almost unlimited low-grade domestic aluminum resources continued, and a project was initiated to recover aluminum from low-value waste materials. Research was also conducted to devise processes for extracting alumina and soda minerals from the extensive oil shale deposits and to develop methods for converting the extracted minerals to industrial chemicals.

A research project was initiated to devise economic processes for recovering nickel, cobalt, and other values from raw material sources including Atlantic and Pacific Ocean shelf deposits and domestic cobaltite ore.

The Bureau continued evaluation and dissemination of information relative to

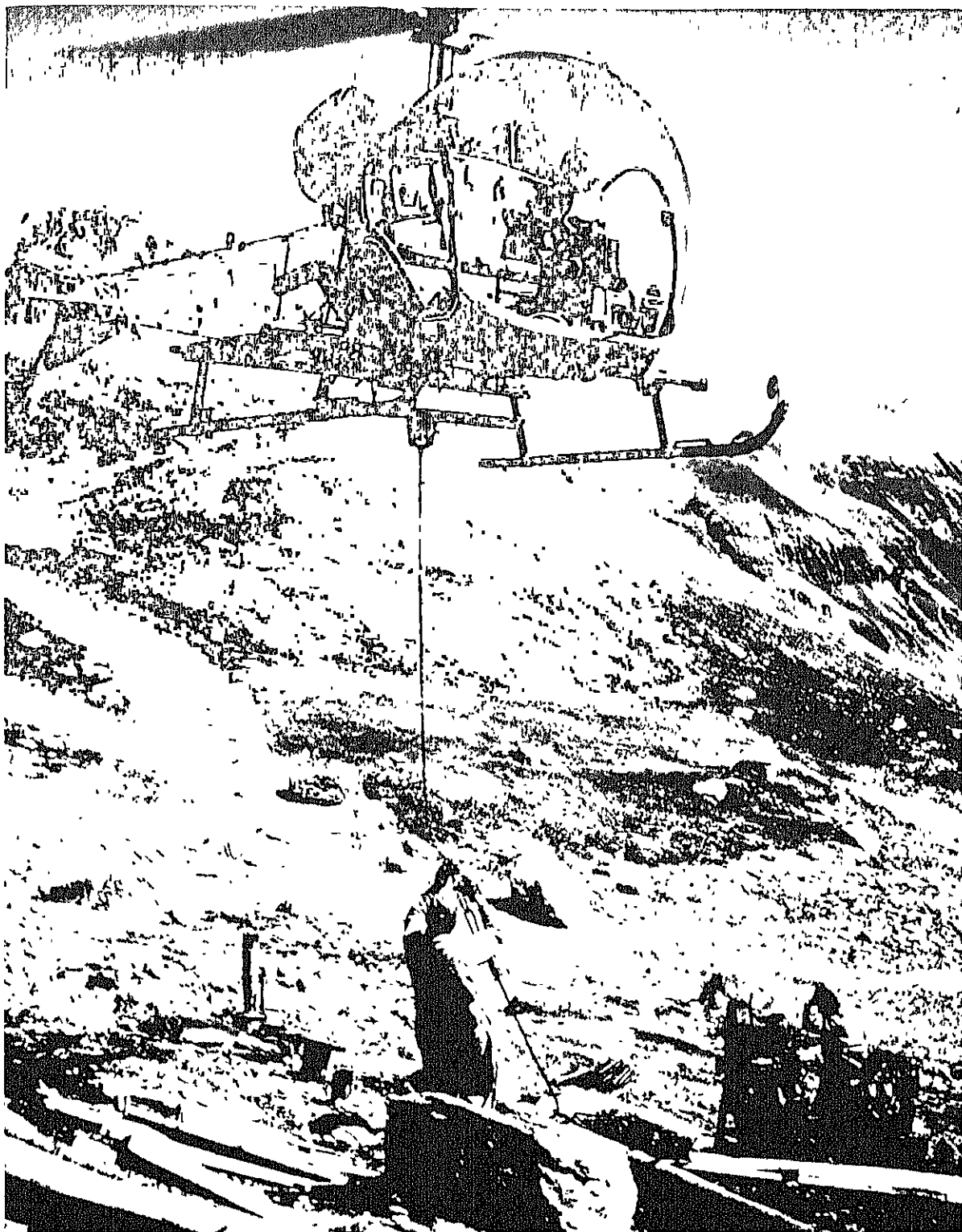
domestic strategic mineral resources. Of note was the marine minerals activity in the study of offshore deposits and development of techniques for delineation, sampling, and metallurgical testing of ocean-floor mineral deposits.

Lower grade and smaller deposits of gold-bearing oxidized ore from the sedimentary beds of northeastern Nevada were studied, and research continued to develop economic methods for recovery of gold from this large potential resource. The heavy metals investigation continued with activity under way throughout the Western States and Alaska.

Previously unknown copper-silver-zinc deposits in a remote sector of the Alaska Range near Farewell, Alaska, have been examined by the Geological Survey in connection with the Interior Department's Heavy Metals program. The largest sulfide body is exposed for a length of 90 feet. Possible continuation of the same body crops out 105 feet away through rock, snow, and glacial debris. Analysis of samples from the deposit show a range of 0.7 to 7.0 percent copper, 1 to 5 percent zinc, and 0.3 to 9 ounces silver per ton. The deposits are accessible by helicopter and ski-equipped, fixed wing light aircraft.

Modern transportation methods are used to bring supplies and services to remote areas where lack of access roads, high altitude, and severe weather conditions make operating conditions difficult. On the following page, a helicopter is shown being used to deliver equipment to a surface diamond drilling project exploring for silver in Colorado at an altitude of 12,800 feet on one of the projects under the Geological Survey's Office of Minerals Exploration.

Special and technical reports, issued during July-December 1968, having a relationship to strategic and critical materials are as follows:



Helicopter delivering equipment to a silver exploration drilling project in Colorado at an altitude of 12,800 feet.

BUREAU OF MINES

Reports of Investigation

- 7148 Beryllium Resources of Idaho, Washington, Montana, and Oregon
- 7156 An Evaluation of an Ammonium Sulfate Leaching Process for Recovering Manganese From Minnesota and Maine Resources
- 7159 Flotation of Mica From Pegmatites of Randolph County, Ala.
- 7162 Alumina Extraction by Autoclave Precipitation of Basic Sodium Aluminum Sulfate
- 7166 Purification and Concentration of a Cyclic Manganese Leach Solution by Elevated Pressure-Temperature Methods
- 7169 Corrosion Properties of the TZM and Molybdenum-30 Tungsten Alloys
- 7175 Amino Acids as Retaining Agents for Separation of Rare-Earth Elements on Ion-Exchange Resin
- 7182 Copper Cementation Using Automobile Scrap in a Rotating Drum
- 7185 Recovery of Sulfur From Molybdenite
- 7188 Flotation Characteristics of Some Beryllium Minerals and Associated Gangue Minerals
- 7189 Microflotation Studies of Some Columbium-Tantalum Minerals
- 7194 Preparation of Anhydrous Chromous Chloride
- 7199 Laboratory Studies on the Use of Sodium Sulfate for Removing Copper From Molten Iron
- 7211 Columbium and Tantalum Alloy Development
- 7218 Copper Removal From Steel Scrap by Thermal Treatment, Feasibility Study

Information Circulars

- 8394 Copper Hydrometallurgy. A Review and Outlook
- 8397 Bureau of Mines Research on the Analysis of High-Purity Tungsten

Journal Articles

- OP 86-68 Potassium Recovery by Chemical Precipitation and Ion Exchange
- OP 107-68 Effects of Rolling Temperature on Creep and Other Properties of Certain Zn-Cu Alloys
- OP 118-68 Recovery and Production of Alumina From Waste Solutions by Solvent Extraction
- OP 121-68 Kinetics of the Thermal Decomposition of Tungsten Hexacarbonyl
- OP 156-68 The Magnesium-Titanium Phase Diagram to 1.0 Pct Titanium
- OP 159-68 Electroslag Melting of Titanium Slabs
- OP 171-68 Differential Extraction of Rare-Earth Elements in Quaternary Ammonium Salt-Chelating Agent Systems
- OP 172-68 Alkalized Alumina Process
- OP 174-68 Preparation of Rare-Earth and Yttrium Metals, by Electrodeposition and Vacuum Distillation of Alloys
- OP 178-68 Electroslag Melting of Titanium Slabs

Open-File Reports

- OFR 10-68 Report on Tantalum Project, Rociada, New Mexico
- OFR 11-68 Hafnium-Zirconium Separation by Selective Reduction

Technical Progress Reports

- TPR 1 Gold Resources in the Oxidized Ores and Carbonaceous Material in the Sedimentary Beds of Northeastern Nevada
- TPR 2 Investigation of Oxidation Systems for Improving Gold Recovery From Carbonaceous Materials
- TPR 3 Gold Resources in the Tertiary Gravels of California
- TPR 5 Gold Resources of the Mother Lode Belt, El Dorado, Amador, Calaveras, Tuolumne, and Mariposa Counties, California

Special Publication

- SP 3 Wealth Out of Waste. Bureau of Mines Programs in Solid Waste Utilization

U. S. GEOLOGICAL SURVEY

Professional Papers

- 341-H Geology and mineral resources of the Barao de Cocais area, Minas Gerais, Brazil, by George C. Simmons (iron, manganese, gold).
- 600-A, C, and D Geological Survey Research 1968, Chapters A, C, and D. Summaries and short papers on recent scientific and economic results of geologic investigations.
- 612 Geochemistry of niobium and tantalum, by R. L. Parker and Michael Fleischer.

Bulletins

- 1252-F Mercury and other trace elements in sphalerite and wallrocks from central Kentucky, Tennessee, and Appalachian zinc districts, by Janice L. Jolly and Allen V. Heyl, Jr.
- 1257 Geology of southwestern North Park and vicinity, Colorado, by William J. Hail, Jr. (coal, manganese).
- 1261-C Mineral resources of the Uncompahgre primitive area, Colorado, by R. P. Fisher, M. J. Sheridan, and R. G. Raabe (gold, silver, copper, lead and zinc).

Circulars

- 594 The Poison Ridge volcanic center and related mineralization, Grand and Jackson Counties, Colorado, by D. M. Kinney, G. A. Izett, R. U. King, and R. B. Taylor (molybdenum and copper).
- 595 Geochemical and geophysical anomalies in the western part of the Sheep Creek Range, Lander County, Nevada, by G. B. Gott and C. J. Zablocki (zinc, arsenic, mercury, silver, lead, gold, copper, antimony).
- 597 Distribution of beryllium, tin, and tungsten in the Lake George area, Colorado, by C. C. Hawley and W. R. Griffiths.

- 600 Geochemical evidence for possible concealed mineral deposits near the Monticello Box, northern Sierra Cuchillo, Socorro County, N. Mexico, by W. R. Griffiths and H. V. Alminas (lead, molybdenum, zinc, copper, tellurium).
- 606 Anomalous concentrations of gold, silver, and other metals in the Mill Canyon area, Cortez quadrangle, Eureka and Lander Counties, Nevada, by J. E. Elliott and J. D. Wells.

Map

- I-559 Geochemical prospecting for copper, lead, and zinc in the west-central part of the Negaunee quadrangle, Marquette County, Michigan, by Kenneth Segerstrom.

EXPENDITURES OF STOCKPILE FUNDS, BY TYPE (FOR THE NATIONAL STOCKPILE)

CUMULATIVE AND FOR FIRST HALF FISCAL YEAR 1969

Type of Expenditure	Cumulative Through June 30, 1968	Six Months Ended December 31, 1968	Cumulative Through December 31, 1968
Expenditures			
Gross Total	\$6,488,950,277	\$8,878,586	\$6,497,828,863
Less: Receipts from Rotation Sales and Reimburse- ments	544,981,952	254,945	545,236,897
Net Total	5,943,968,325	8,623,641	5,952,591,966
Materials Acquisition Costs, Total	5,439,108,496	8,396	5,439,116,892
Stockpile Maintenance Costs, Total	429,554,881	5,817,745	435,372,626
Facility Construction	43,772,457	—	43,772,457
Storage and Handling Costs	283,032,066	5,806,699	288,838,765
Net Rotation Costs	102,750,358	11,046	102,761,404
Administrative Costs	63,639,772	2,334,577	65,974,349
Operations, Machine Tool Program	11,665,176	462,923	12,128,099

Cumulative figures are the total of expenditures under PL 117, 76th Congress and PL 520, 79th Congress. Expenditures under PL 117 totaled \$70,000,000 of which \$55,625,237 was for materials acquisition costs and \$14,374,763 was for other costs. Final expenditures under PL 117 were made in FY 1951.

Source: General Services Administration

TOTAL OBLIGATIONS AND EXPENDITURES OF STOCKPILING FUNDS

Under PL 117 and PL 520 for THE NATIONAL STOCKPILE

CUMULATIVE AND BY FISCAL PERIOD THROUGH DECEMBER 31, 1968

Fiscal Period	OBLIGATIONS INCURRED ^A		EXPENDITURES ^B	
	Net Change by Fiscal Period	Cumulative As of End of Period	By Fiscal Period	Cumulative As of End of Period
Prior to Fiscal Year 1948	\$ 123,871,685	\$ 123,871,685	\$ 66,330,731	\$ 66,330,731
Fiscal Year 1948	252,901,411	376,773,096	82,907,575	149,238,306
Fiscal Year 1949	459,766,881	836,539,977	304,486,177	453,724,483
Fiscal Year 1950	680,427,821	1,516,967,798	440,834,970	894,559,453
Fiscal Year 1951	2,075,317,099	3,592,284,897	655,537,199	1,550,096,652
Fiscal Year 1952	948,117,547	4,540,402,444	844,683,459	2,394,780,111
Fiscal Year 1953	252,375,163	4,792,777,607	906,158,850	3,300,938,961
Fiscal Year 1954	116,586,681	4,909,364,288	644,760,321	3,945,699,282
Fiscal Year 1955	321,799,833	5,231,164,121	801,310,094	4,747,009,376
Fiscal Year 1956 ^C	251,692,667	5,482,856,788	382,011,786 ^C	5,129,021,162 ^C
Fiscal Year 1957	190,000,109	5,672,856,897	354,576,558	5,483,597,720
Fiscal Year 1958	54,473,250	5,727,330,147	173,753,997	5,657,351,717
Fiscal Year 1959	38,710,879	5,766,041,026	65,260,098	5,722,611,815
Fiscal Year 1960	19,859,290	5,785,900,316	49,227,142	5,771,838,957
Fiscal Year 1961	29,082,919	5,814,983,235	33,325,431	5,805,164,388
Fiscal Year 1962	31,179,407	5,846,162,642	33,695,431	5,838,859,819
Fiscal Year 1963	17,414,900	5,863,577,542	22,104,176	5,860,963,995
Fiscal Year 1964	15,489,597	5,879,067,139	16,091,067	5,877,055,062
Fiscal Year 1965	16,288,732	5,895,355,871	16,561,275	5,893,616,337
Fiscal Year 1966	16,296,070	5,911,651,941	16,468,100	5,910,084,437
Fiscal Year 1967	18,197,410	5,929,849,351	17,981,675	5,928,066,112
Fiscal Year 1968	16,008,237	5,945,857,588	15,902,213	5,943,968,325
Fiscal Year 1969-First half	8,356,130	5,954,213,718	8,623,641	5,952,591,966

A Figures are the sum of obligations incurred under PL 520, 79th Congress and PL 117, 76th Congress. Final obligations under PL 117, 76th Congress were incurred in Fiscal Year 1949.

B Figures are the sum of expenditures under PL 520, 79th Congress and PL 117, 76th Congress. Final expenditures under PL 117, 76th Congress were made in Fiscal Year 1951.

C 1956 and subsequent fiscal periods and cumulative expenditures are reported on an accrual basis.

Source: General Services Administration

STATUS OF OBLIGATIONAL OPERATIONS
Under PL-117 and PL-520

As of December 31, 1968

AUTHORITY	APPROPRIATED FUNDS ^a	AUTHORIZATIONS FOR			OBLIGATIONAL AUTHORITY (CUMULATIVE) ^d
		ADVANCE CONTRACTS ^b	LIQUIDATING ADVANCES ^c		
Under PL-117--76th Congress	\$	\$	\$	\$	\$
PL-361--76th Congress, August 9, 1939	10,000,000				10,000,000
PL-442--76th Congress, March 25, 1940	12,500,000				22,500,000
PL-667--76th Congress, June 26, 1940	47,500,000				70,000,000 ^e
Under PL-520--79th Congress					
PL-663--79th Congress, August 8, 1946	100,000,000				100,000,000
PL-271--80th Congress, July 30, 1947	100,000,000	75,000,000			275,000,000
PL-785--80th Congress, June 25, 1948	225,000,000	300,000,000			800,000,000
PL-785--80th Congress, June 25, 1948	75,000,000		75,000,000		800,000,000
PL-119--81st Congress, June 23, 1949	40,000,000	270,000,000			1,110,000,000
PL-150--81st Congress, June 30, 1949	275,000,000	250,000,000			1,635,000,000
PL-150--81st Congress, June 30, 1949	250,000,000		250,000,000		1,635,000,000
PL-434--81st Congress, October 29, 1949					1,635,000,000
PL-759--81st Congress, September 6, 1950	365,000,000				1,660,000,000
PL-759--81st Congress, September 6, 1950	240,000,000				2,025,000,000
PL-843--81st Congress, September 27, 1950	573,232,449 ^g	125,000,000			2,598,232,449
PL-911--81st Congress, January 6, 1951	1,834,911,000				4,433,143,449
PL-253--82nd Congress, November 1, 1951	590,216,500				5,023,359,949
PL-253--82nd Congress, November 1, 1951	200,000,000				5,023,359,949
PL-455--82nd Congress, July 25, 1952	203,979,000				5,157,338,949
PL-176--83rd Congress, July 31, 1953					5,127,338,949
PL-428--83rd Congress, June 24, 1954					5,099,738,949
PL-663--83rd Congress, August 26, 1954	379,952,000 ^h				5,479,690,949
PL-112--84th Congress, June 30, 1955	321,721,000 ⁱ				5,801,411,949
PL-112--84th Congress, June 30, 1955	27,400,000		27,400,000		5,801,411,949
PL-844--85th Congress, August 28, 1958	3,000,000				5,804,411,949
PL-255--86th Congress, September 14, 1959	-58,370,923 ^j				5,746,041,026
PL-626--86th Congress, July 12, 1960	22,237,000 ^k				5,768,278,026

PL-141-87th Congress, August 17, 1961	16,682,510 ^l	—	5,784,960,536
PL-741-87th Congress, October 3, 1962	8,729,887 ^m	—	5,793,690,423
PL-215-88th Congress, December 19, 1963	23,925,000	—	5,817,615,423 ⁿ
PL-507-88th Congress, August 30, 1964	9,319,168 ^o	—	5,826,934,591
PL-16-89th Congress, April 30, 1965	118,500	—	5,827,053,091
PL-128-89th Congress, August 16, 1965	16,096,284 ^p	—	5,843,149,375
PL-555-89th Congress, September 6, 1966	18,493,789 ^q	—	5,861,643,164
PL-21-90th Congress, May 29, 1967	244,000	—	5,861,887,164
PL-121-90th Congress, November 3, 1967	16,341,212 ^r	—	5,878,228,376
PL-550-90th Congress, October 4, 1968	16,725,000 ^s	—	5,894,953,376
Total PL-117 and PL-520	\$5,964,953,376	\$1,020,000,000	\$5,964,953,376

Source: General Services Administration

- a Congressional appropriations of funds for stockpiling purposes.
- b Congressional appropriations of contracting authority for stockpiling purposes in advance of appropriation of funds.
- c Congressional authorizations to liquidate outstanding obligations incurred under previously granted advance contract authority.
- d Cumulative total of appropriated funds and advance contract authorization, less authorization to liquidate outstanding advance contract.
- e Excludes \$8,845,792 received from sale of stockpile materials for wartime consumption. Receipts were returned to Treasury, February, 1948.
- f Cancellation of previously authorized authority to make contracts.
- g Excludes \$25,404,921 transferred to operating expenses for rehabilitation of Government-owned material producing plants.
- h Excludes \$48,000 transferred to Transportation and Public Utilities Service, GSA.
- i Excludes \$430,000 transferred to Transportation and Public Utilities Service, GSA and \$199,349,000 transferred to General Fund Receipts on June 27, 1956-PL-623-84th Congress.
- j As of June 30, 1959, this amount included cash of \$52,350,792 and receivables of \$6,020,131.
- k Excludes \$7,763,000 transferred to other GSA Funds for classified and wage board salary increases during 1961.
- l Appropriation of \$40,000,000 of which \$22,700 transferred to Office of Administrator, GSA and \$23,294,790 transferred to General Fund Receipts.
- m Appropriation of \$18,095,000 less transfers to General Fund Receipts of \$9,365,113.
- n Excludes receipts from rotational sales.
- o Appropriation of \$17,755,000 less returns to Treasury of \$8,435,832.
- p Appropriation of \$17,400,000 less returns to Treasury of \$1,303,716.
- q Appropriation of \$19,847,000 less returns to Treasury of \$1,353,211.
- r Stock Piling portion of OE, PMDS appropriation, \$18,712,000, less returns to Treasury of \$2,370,788.
- s Stock Piling portion of OE, PMDS appropriation, \$16,725,000.

Title 32A—NATIONAL DEFENSE, APPENDIX

Chapter I—Office of Emergency Preparedness

[Defense Mobilization Order 8600 1A]

DMO 8600.1A—GENERAL POLICIES FOR STRATEGIC AND CRITICAL MATERIALS STOCKPILING

1. *Purpose.* This order sets forth revised policies for the administration of strategic and critical materials stockpiling.

2. *Cancellation.* This order supersedes Defense Mobilization Order 8600.1 (29 F.R. 5078, Apr. 14, 1964).

3. *Policies.* By virtue of the authority vested in me by Executive Order 11051, the following policies are promulgated to govern the administration of strategic and critical materials stockpiling:

a. *General.* The strategic stockpile shall be so administered as to assure the availability of strategic and critical materials in a war emergency.

b. *Period covered by stockpiling.* All strategic stockpile objectives for conventional war shall be limited to meeting estimated shortages of materials for a 3-year emergency period. Strategic stockpile objectives for nuclear war involving attack on the United States, shall be designed to meet estimated shortages of materials during (a) actual hostilities and (b) the reconstruction of the national economy to a point where it is adequate for national defense.

c. *Stockpile objectives.* Strategic stockpile objectives shall be adequate for conventional or nuclear war, whichever shows the largest supply-requirements deficit to be met by stockpiling.

d. *Emergency requirements.* The requirements estimates for conventional or nuclear war shall, where appropriate, reflect specific requirements to the extent available. It shall be assumed that the total requirements will approximate the capacity of industry to consume, taking into account necessary wartime limitation, conservation and substitution measures. Requirements shall be discounted for wartime losses of consuming capacity to the extent that such losses can be reliably estimated. Departments and agencies having responsibilities with regard to requirements data on stockpile materials shall review such data and provide the Director of the Office of Emergency Preparedness annually with information as to all significant changes.

e. *Emergency supplies.* Estimates of supply for the mobilization period shall be based on readily available capacity and known resources in the United States and such other countries as certified by the Joint Chiefs of Staff and as approved by the Director. The share of an accessible foreign source of supply available to the United States shall be discounted to reflect the risks involved internally in the supply country and the risks of concentration of the sources. Domestic supplies shall be discounted to reflect vulnerability to total or partial destruction

by overt or covert action or disaster. In cases of excessive concentration particularly, provision shall be made for supplies during the estimated time required to restore capacity and operations unless substitute capacity can be located in the United States, Canada, Mexico, or the Caribbean area. Departments and agencies having the responsibilities with regard to supply data on stockpile materials shall review such data and provide the Director of the Office of Emergency Preparedness annually with information as to all significant changes.

f. *Provision for special-property materials.* Arrangements shall be made for the regular availability of objective scientific advice to assist in the evaluation of prospective needs for high-temperature and other special-property materials. Such materials shall be stockpiled if reasonably firm minimum requirements indicate the existence of a supply deficit in the event of an emergency.

g. *Supply-requirements reviews.* The supply-requirements balance for any material that is now or may become important to defense shall be kept under continuing surveillance. Supply-requirements data submitted pursuant to paragraphs d. and e. above shall be examined upon receipt. A full-scale review may be undertaken at any time that a change is believed to be taking place that would have a significant bearing on the wartime readiness position. Priority of review shall be given to materials under procurement.

h. *Procurement policy.* Unfilled objectives shall be attained expeditiously by cash procurement, barter, surplus transfers or exchange for other surplus commodities, or otherwise as the Director shall deem appropriate. Long-term contracts shall contain termination clauses whenever possible. All feasible measures for meeting materials deficits in an emergency shall be considered. Stockpiling shall be undertaken only when it is clear that it is the best solution.

i. *Maintenance of the mobilization base.* A portion of the mobilization base comprises existing or projected productive capacity the output of which will be relied on to fill defense requirements. All inventories of Government-owned materials held for long-term storage are a part of the mobilization base and should be weighed in determining the need for a relevant portion of the productive segment of the mobilization base. The maintenance of any portion of the productive segment of the mobilization base through stockpile procurement shall be undertaken only within unfilled stockpile objectives.

j. *Upgrading to ready usability.* In order to satisfy the initial surge of abnormal demands following intensive mobilization either in a conventional or nuclear war, subobjectives of stockpile materials shall be established for upgraded forms of such materials for immediate use in such circumstances. For this purpose a minimum readiness inventory shall be provided near centers of consumption. To the greatest extent practicable the amounts of such inventories should be based on the largest of

the calculated mobilization requirements for any of the foregoing types of war during the first year of mobilization. Materials in Government inventories may be upgraded for such stockpiling purposes only when the net cost of such processing including transportation and handling is less than the cost of new material. Materials should be upgraded to forms which will permit the greatest use-flexibility. Surplus materials may be used to pay for the upgrading of the same or other materials required to meet objectives providing that the use of excess materials for this purpose is in conformance with disposal criteria.

k. *Beneficiation of subspecification materials.* Subspecification-grade materials in Government inventories may be beneficiated within the limits of the objectives when this can be accomplished at less cost than buying new material.

l. *Cancellation of Commitments.* Commitments for deliveries to national stockpile and Defense Production Act inventories beyond the objectives shall be canceled or reduced when settlements can be arranged which would be mutually satisfactory to the supplier and the Government and which would not be disruptive to the economy or to projects essential to the national security. Such settlements may take into account anticipated profits and cover adjustments for above-market premiums. The settlement of commitments may be made through the payment of cash or through the use of surplus materials. Responsibility with respect to the settlement of commitments in the light of over-all interest of the Government rests with the Administrator of General Services who shall keep other agencies advised and consult with them to the extent appropriate.

m. *Retention of other inventories.* Within the limits of unfilled stockpile objectives, stockpile-grade materials in the Defense Production Act and the Supplemental Stockpile Inventories shall be retained for national stockpile purposes.

n. *Disposals.* The Director of the Office of Emergency Preparedness will authorize the disposal of excess materials whenever possible under the following conditions: (a) Avoidance of serious disruption of the usual markets of producers, processors and consumers, (b) avoidance of adverse effects on the international interests of the United States, (c) due regard to the protection of the United States against avoidable loss, (d) avoidance of adverse effects upon domestic employment and labor disputes, and (e) except when materials are channeled to other agencies for their direct use, consultation with the Departments of the Interior, Commerce, State, Agriculture, Defense, Labor, and other governmental agencies concerned, and consultation as appropriate with the industries concerned. If within 30 days after such consultation either the Department of State or the Department of the Interior indicates an objection to the proposed plan which, after discussion, the Director does not support, he shall so notify the President and present the issue to him for decision. To the extent possible, disposals

should be made in accordance with long-run disposal plans which have been worked out in consultation with the interested departments and which take into account probable trends in supply and price both at home and abroad.

In making such disposals preference shall be given to materials in the Defense Production Act inventories.

Disposals of materials that deteriorate, that are likely to become obsolete, that do not meet quality standards, or that do not have stockpile objectives, are to be expedited.

The Administrator of General Services shall be responsible for conducting negotiations for the sale of materials and will consult with and advise the agencies concerned.

c. Public notice on disposals. Generally the sale of excess materials acquired under the Defense Production Act will be made only after appropriate public announcement of the quantity or quantities to be offered in a specified period of time.

p. Direct Government use. Government agencies which directly use strategic and critical materials shall fulfill their requirements through the use of materials in Government inventories that are excess to the needs thereof whenever such action is found to be consistent with overall disposal policies and with the best interests of the Government. Except where appropriate in the judgment of the Administrator of General Services, the requirements of subsection n. above, with respect to approval by Government departments or agencies and consultation with industries, shall not be applicable to transfers of strategic and critical materials for direct Government use.

*4. Delegation of authority—*a. *Preparation of reports.* The Administrator of General Services shall prepare on behalf of the Director of the Office of Emergency Preparedness and forward to him for transmittal to the Congress the reports required by section 304 of the

Defense Production Act of 1950, as amended, and section 4 of the Strategic and Critical Materials Stock Piling Act.

b. Supplemental Stockpile. The Administrator of General Services shall on behalf of the Director of the Office of Emergency Preparedness and in accordance with programs certified by him, purchase or contract for the purchase of materials for the Supplemental Stockpile under Title III of the Agricultural Trade Development and Assistance Act of 1954, as amended.

5. Effective date. This order shall take effect on the date hereof.

Dated: December 18, 1968.

PRICE DANIEL,
Director,

Office of Emergency Preparedness.
[F.R. Doc. 68-15230; Filed, Dec. 20, 1968;
8:45 a.m.]